Volume 130 1983

Table of Contents

No. 1 1–234 issued on January 17, 1983
No. 2 235–426 issued on February 1, 1983
No. 3 427–688 issued on February 15, 1983

Author and Keyword Index Volumes 121–130, 1981–1983 621–687

Acknowledgement to Referees 1– 3

Corrections 619

Nucleic Acids, Protein Synthesis, and Molecular Genetics

The Inhibition Pattern of Antibiotics on the Extent and Accuracy of tRNA Binding to the Ribosome, and Their Effect on the Subsequent Steps in Chain Elongation
P. Wurmbach and K. H. Nierhaus 9– 12

ADP-Ribosylation in Permeable HeLa S3 Cells
J. Holtlund, T. Kristensen. A. C. Østvold, and S. G. Laland 47– 51

Elicitor Induction of mRNA Activity. Rapid Effects of Elicitor on Phenylalanine Ammonia-Lyase and Chalcone Synthase mRNA Activities in Bean Cells
M. A. Lawton, R. A. Dixon, K. Hahlbrock, and C. J. Lamb 131–139

Selective Expression of Cloned Middle-Repetitive Sequences in Nuclear RNA of Mouse Organs
A. Kuroiwa, M. Obinata, and S. Natori 161–165

Translational Stability of Plant Viral RNAs Microinjected into Living Cells. Influence of a 3-Poly(A) Segment
G. Huez, Y. Cleuter, C. Bruck, L. Van Vloten-Doting, R. Goldbach, and B. Verduin 205–209

Synthesis of Vimentin in a Reticulocyte Cell-Free System Programmed by Poly(A)-Rich RNA from Several Cell Lines and Rat Liver
C. F. McTavish, W. J. Nelson, and P. Traub 211–221

Unmetabolized 5,6-Dichlororibofuranosyl-benzimidazole Rather than Its Monophosphate Metabolites Is Probably the Active Transcription Inhibitor
E. Egyházi, M. Holst, and U. Tayip 223–226

Modified Plasma-Membrane ATPase in Mutants of *Saccharomyces cerevisiae*
S. Ulaszewski, M. Grenson and A. Goffeau 235–239

Organization of Nucleotide Sequences in the Chicken Genome
B. Olofsson and G. Bernardi 241–245

On the Phosphorylation of Yeast RNA Polymerases A and B
B. Bréant, J.-M. Buhler, A. Sentenac, and P. Fromageot 247–251

Variation of (2′-5′)Oligo(adenylate) Synthetase Activity during Rat-Liver Regeneration
M. Smekens-Etienne, J. Goldstein, H. A. Oonis, and J. E. Dumont 269–273

Coordinate and Non-coordinate Estrogen-Induced Expression of A and B Groups of Vitellogenin Genes in Male and Female *Xenopus* Hepatocytes in Culture
A. P. Wolffe and J. R. Tata 365–372

The Role of EF-Tu in the Expression of *tufA* and *tufB* Genes
P. H. van der Meide, E. Vijgenboom, A. Talens, and L. Bosch 397–407

tuf Gene Dosage Effects on the Intracellular Concentration of EF-TuB
P. H. van der Meide, R. A. Kastelein, E. Vijgenboom, and L. Bosch 409–417

Hyperproduction of Phosphate-Binding Protein, *phoS*, and pre-*phoS* Proteins in *Escherichia coli* Carrying a Cloned *phoS* Gene
T. Morita, M. Amemura, K. Makino, H. Shinagawa, K. Magota, N. Otsuji, and A. Nakata 427–435

Arginyl-tRNA Synthetase from Brewer's Yeast. Purification, Properties, and Steady-State Mechanism
R. Thiebe 517–524

No Arginyl Adenylate Is Detectable as an Intermediate in the Aminoacylation of $tRNA^{Arg}$
R. Thiebe 525–528

The Fate of *Xenopus* and Locust Vitellogenins Made in *Xenopus* Oocytes. An Export-Import Processing Model
C. D. Lane, J. Champion, A. Colman, T. C. James, and S. W. Applebaum 529–535

Protein Chemistry and Structure

Heterogeneity of the Basic Pancreatic Inhibitor (Kunitz) in Various Bovine Organs
E. Fioretti, I. Binotti, D. Barra, G. Citro, F. Ascoli, and E. Antonini 13– 18

The Complete Amino Acid Sequence of the Zn^{2+}-Containing D-Alanyl-D-Alanine-Cleaving Carboxypeptidase of *Streptomyces albus* G
B. Joris, J. Van Beeumen, F. Casagrande, C. Gerday, J.-M. Frère, and J.-M. Ghuysen 53– 69

The Multifunctional Polypeptide Chains of Rabbit-Mammary Fatty-Acid Synthase. Stoichiometry of Active Sites and Active-Site Mapping Using Limited Proteolysis
A. D. McCarthy and D. G. Hardie 185–193

Proteolytic Cleavage of *Hansenula anomala* Flavocytochrome b_2 into Its Two Functional Domains. Isolation of a Highly Active Flavodehydrogenase and a Cytochrome b_2 Core
M. Gervais, Y. Risler, and S. Corazzin 253–259

Two Proteolytic Degradation Products of Calf-Thymus Poly(ADP-ribose) Polymerase are Efficient ADP-ribose Acceptors. Implications for Polymerase Architecture and the Automodification of the Polymerase
J. Holtlund, R. Jemtland, and T. Kristensen 309–314

The Structure of 11-S Globulins from Sunflower and Rape Seed. A Small-Angle X-Ray Scattering Study
P. Plietz, G. Damaschun, J. J. Müller, and K.-D. Schwenke 315–320

Nucleosomal Particles Open as the Histone Core Becomes Hyperacetylated
J. Bode, M. M. Gómez-Lira, and H. Schröter 437–445

Primary Structure of Histone H2A from Gonads of the Starfish *Asterias rubens*
A. Martinage, D. Belaiche, T. Dupressoir, and P. Sautiere 465–472

Amino-Acid Sequence of the Active-Site Sulfhydryl Peptide and Other Thiol Peptides from the Cysteine Proteinase α-Clostripain
A.-M. Gilles, A. De Wolf, and B. Keil 473–479

Desulfovibrio Gigas Hydrogenase: Redox Properties of the Nickel and Iron-Sulfur Centers
M. Teixeira, I. Moura, A. V. Xavier, D. V. Dervartanian, J. Legall, H. D. Peck, Jr, B. H. Huynh, and J. J. G. Moura 481–484

Interaction of Concanavalin A with Native and Denatured Forms of Jackbean α-D-Mannosidase
D. J. Bowles, M. F. Chaplin, and S. E. Marcus 613–618

Enzymology

Latent and Active Human Polymorphonuclear Leukocyte Collagenases. Isolation, Purification and Characterisation
H. W. Macartney and H. Tschesche 71–78

The Collagenase Inhibitor from Human Polymorphonuclear Leukocytes. Isolation, Purification and Characterisation
H. W. Macartney and H. Tschesche 79–83

Characterisation of β_1-Anticollagenase from Human Plasma and Its Reaction with Polymorphonuclear Leukocyte Collagenase by Disulfide/Thiol Interchange
H. W. Macartney and H. Tschesche 85–92

Interaction of β_1-Anticollagenase from Human Plasma with Collagenases from Various Tissues and Competition with α_2-Macroglobulin
H. W. Macartney and H. Tschesche 93–97

Kinetics of Reduction of Putidamonooxin by NADH–Putidamonooxin Oxidoreductase, Sodium Dithionite and Superoxide Radicals
F.-H. Bernhardt and H. Kuthan 99–103

The Role of Pyrrolo-quinoline Semiquinone Forms in the Mechanism of Action of Methanol Dehydrogenase
R. De Beer, J. A. Duine, J. Frank, Jzn., and J. Westerling 105–109

UDPglucosyltransferase and Its Kinetic Fluorimetric Assay
M. V. T. Väisänen, P. I. Mackenzie, and O. O. P. Hänninen 141–145

Purification and Characterization of a Pig Intestinal α-Limit Dextrinase
F. R. Taravel, R. Datema, W. Woloszcuk, J. J. Marshall, and W. J. Whelan 147–153

Inactivation of 3-Oxoacyl Synthetase Activity of Pigeon Liver Fatty Acid Synthetase by *S*-(4-Bromo-2,3-dioxobutyl)-coenzyme A
S. S. Katiyar, D. Pan, and J. W. Porter 177–184

A Study of Some Molecular and Kinetic Properties of Two tRNA Methyltransferases from Mouse Plasmocytoma
F. Nau, G. Pham-Cœur-Joly, and J.-M. Dubert 261–268

NAD-Linked L(+)-Lactate Dehydrogenase from the Strict Aerobe *Alcaligenes eutrophus*. 1. Purification and Properties
A. Steinbüchel and H. G. Schlegel 321–328

NAD-Linked L(+)-Lactate Dehydrogenase from the Strict Aerobe *Alcaligenes eutrophus*. 2. Kinetic Properties and Inhibition by Oxaloacetate
A. Steinbüchel and H. G. Schlegel 329–334

Evidence for an Enzyme which Cleaves the Guanidinobenzoate Moiety from Active-Site Titrants Specifically Designed to Inhibit and Quantify Trypsin
F. S. Steven and R. K. Al-Ahmad 335–339

A Stereochemical and Positional Isotope-Exchange Study of the Mechanism of Activation of Methionine by Methionyl-tRNA Synthetase from *Escherichia coli*
G. Lowe, B. S. Sproat, and G. Tansley 341–345

Catalytically Active Monomer Forms of Immobilized Arginase
R. Aguirre and V. Kasche 373–381

6-Phospho-D-gluconate Dehydrogenase from *Pseudomonas fluorescens*. Properties and Subunit Structure
C. Stournaras, P. Maurer, and G. Kurz 391–396

Regulation of Enzymatic Iodothyronine Synthesis in Thyroglobulin by Low Concentrations of Iodide
E. Wildberger, C. von Gruenigen, J. Kohler, H. Kohler, and H. Studer 485–490

Carbohydrates, Lipids and Other Natural Products

Natural-Abundance ^{13}C-NMR Spectroscopy of Two Glyco-asparagines Derived from the Core of *N*-Glycosidic Carbohydrate Chains
B. W. Dijkstra, J. F. G. Vliegenthart, G. Strecker, and J. Montreuil 111–115

Fatty Acid in Lipopolysaccharides of *Salmonella* Species Grown at Low Temperature
Identification and Position
H.-W. Wollenweber, S. Schlecht, O. Lüderitz, and E. T. Rietschel 167–171

Enzymic Properties of an *N*-Acetylglucosaminide 3-α-L-Fucosyltransferase of a Wheat-Germ Agglutinin-Resistant Melanoma Clone
J.-P. Prieels, D. Monnom, J.-P. Perraudin, J. Finne, and M. Burger 347–351

Secondary Structure of Chondroitin Sulphate in Dimethyl Sulphoxide
J. E. Scott, F. Heatley, M. N. Jones, A. Wilkinson, and A. H. Olavesen 491–495

Structural Elements of Methanopterin, a Novel Pterin Present in *Methanobacterium thermoautotrophicum*
J. T. Keltjens, M. J. Huberts, W. H. Laarhoven, and G. D. Vogels 537–544

A Novel One-Carbon Carrier (Carboxy-5,6,7,8-tetrahydromethanopterin) Isolated from *Methanobacterium thermoautotrophicum* and Derived from Methanopterin
J. T. Keltjens, L. Daniels, H. G. Jannsen, P. J. Borm, and G. D. Vogels 545–552

Gangliosides of Human Chronic Lymphocytic Leukemia and Hairy Cells
B. A. Goff, W. M. F. Lee, M. A. Westrick, and B. A. Macher 553–557

Physical Biochemistry

Differential Effect of Tumor Promoters on Phorbol-Ester-Receptor Binding and Membrane Fluorescence Anisotropy in C3H 10T1/2 Cells
P. L. Tran, M. Castagna, M. Sala, G. Vassent, A. D. Horowitz, D. Schachter, and I. B. Weinstein 155–160

α_1 Acid Glycoprotein: a Small-Angle Neutron Scattering Study of a Human Plasma Glycoprotein
Z. Q. Li, S. J. Perkins, and M. H. Loucheux-Lefebvre 275–279

Rotational Motion of Actin Monomer at Low and High Salt Concentration
J. Belágyi and P. Gróf 353–358

Determination of Protonation Sites in Thermospermine and in Some Other Polyamines by ^{15}N and ^{13}C Nuclear Magnetic Resonance Spectroscopy
Y. Takeda, K. Samejima, K. Nagano, M. Watanabe, H. Sugeta, and Y. Kyogoku 383–389

Sequential Individual Resonance Assignments in the ^1H Nuclear-Magnetic-Resonance Spectrum of Cardiotoxin V^{II} 2 from *Naja mossambica mossambica*
R. V. Hosur, G. Wider, and K. Wüthrich 497–508

Hydroxylamine Mutagenesis: Observation of Inverted Watson-Crick Base-Pairing Between N^4-Methoxycytosine and Adenine with the Aid of Natural-Abundance High-Resolution ^{15}N NMR Spectroscopy
B. Kierdaszuk, R. Stolarski, and D. Shugar 559–564

Membranes and Bioenergetics

Excimer Formation of ATPase from Sarcoplasmic Reticulum Labeled with *N*-(3-Pyrene)maleinimide
H. Lüdi and W. Hasselbach 5– 8

Interaction of a Peripheral Protein of the Erythrocyte Membrane, Band 4.1, with Phosphatidylserine-Containing Liposomes and Erythrocyte Inside-Out Vesicles
S. B. Sato and S. Ohnishi 19– 25

Association of the Prolipoprotein Accumulated in the Presence of Globomycin with the Outer Membrane of *Escherichia coli*
M. Inukai and M. Inouye 27– 32

Oxene Donors Yield Low-Level Chemiluminescence with Microsomes and Isolated Cytochrome P-450
E. Cadenas, H. Sies, H. Graf, and V. Ullrich 117–121

Studies on Energy Supply for Genetic Processes
Requirement for Membrane Potential in *Escherichia coli* Infection by Phage T4
E. V. Kalasauskaitė, D. L. Kadišaitė, R. J. Daugelavičius, L. L. Grinius, and A. A. Jasaitis 123–130

On the Relationship between Calcium and Phosphate Transport, Transmembrane Potential and Acetoacetate-Induced Oxidation of Pyridine Nucleotides in Rat-Liver Mitochondria
D. Siliprandi, N. Siliprandi, and A. Toninello 173–175

Intramitochondrial ATP and Cell Functions: Yeast Cells Depleted of Intramitochondrial ATP Lose the Ability to Grow and Multiply
Y. Gbelská, J. Šubík, A. Svoboda, A. Goffeau, and L. Kováč 281–286

The Transmembrane Electrical Potential in *Rhodopseudomonas sphaeroides* Determined from the Distribution of Tetraphenylphosphonium after Correction for Its Binding to Cell Components
J. S. Lolkema, A. Abbing, K. J. Hellingwerf, and W. N. Konings 287–292

The Distribution of Redox Equivalents in the Anaerobic Respiratory Chain of *Paracoccus denitrificans*
I. Kučera, V. Dadák, and R. Dobrý 359–364

Investigation of the Primary Photochemistry of Bacteriorhodopsin by Low-Temperature Fourier-Transform Infrared Spectroscopy
F. Siebert and W. Mäntele 565–573

The Influence of the Ionic Conductance on the Relation between Electron Transport and Proton-Motive Force in Intact Cells of *Rhodopseudomonas capsulata*
A. J. Clark, N. P. J. Cotton, and J. B. Jackson 575–580

Interaction between the Respiratory and Photosynthetic Electron Transport Chains of Intact Cells of *Rhodopseudomonas capsulata* Mediated by Membrane Potential
N. P. J. Cotton, A. J. Clark, and J. B. Jackson 581–587

Immunochemical Demonstration of Zonal Growth of the Cell Envelope of *Escherichia coli*
M. T. Davison and P. B. Garland 589–597

Cellular Biochemistry and Metabolism

Calmodulin Stimulation of Adenylate Cyclase of Intestinal Epithelium
B. M. Amiranoff, M. C. Laburthe, C. M. Rouyer-Fessard, J. G. Demaille, and G. E. Rosselin 33– 37

Free *N*-Acetylneuraminic Acid in Tissues in Salla Disease and the Enzymes Involved in Its Metabolism
M. Renlund, M. A. Chester, A. Lundblad, J. Parkkinen, and T. Krusius 39– 45

A Comparative Study of Citrate Efflux from Mitochondria of Oleaginous and Non-oleaginous Yeasts
C. T. Evans, A. H. Scragg, and C. Ratledge 195–204

Glycogen Synthase from Rabbit Skeletal Muscle; Effect of Insulin on the State of Phosphorylation of the Seven Phosphoserine Residues *in vivo*
P. J. Parker, F. B. Caudwell, and P. Cohen 227–234

Inhibitory Effect of 1-β-D-Arabinofuranosylcytosine on the Synthesis of Phosphatidyl-dCMP
S. Iujvidin, C. Feledi, E. E. Medrano, and J. Mordoh 293–296

Heterogeneous Distribution of ATP Citrate Lyase in Rat-Liver Parenchyma. Microradiochemical Determination in Microdissected Periportal and Perivenous Liver Tissue
N. R. Katz, W. Fischer, and M. Ick 297–301

Demonstration and Characterisation of a Testicular Receptor for 1,25-Dihydroxycholecalciferol in the Rat
J. Merke, W. Kreusser, B. Bier, and E. Ritz 303–308

The Major Proteins from HeLa Cells. Identification and Intracellular Localization
J. A. Lenstra and H. Bloemendal 419–426

Protein Kinases of Rat Liver during Hepatocarcinogenesis Induced by an Azo Dye
A. Weber, D. Cottreau, J. Henry, F. Phan Dinh Tuy, H. Skala, and A. Kahn 447–456

Effects of Experimental Insulin-Dependent Diabetes on the β-Adrenergic-Receptor-Coupled Adenylate-Cyclase System and Lipolysis in Fat Cells of the Rat
D. Lacasa, B. Agli, and Y. Giudicelli 457–464

The Proof by ^{13}C-NMR Spectroscopy of the Predominance of the C_5 Pathway over the Shemin Pathway in Chlorophyll Biosynthesis in Higher Plants and of the Formation of the Methyl Ester Group of Chlorophyll from Glycine
R. J. Porra, O. Klein, and P. E. Wright 509–516

Characterization of Phosphorylated and Native cGMP-Dependent Protein Kinase
F. Hofmann and V. Flockerzi 599–603

Occurrence of an Inhibitory Guanine Nucleotide-Binding Regulatory Component of the Adenylate Cyclase System in cyc^- Variants of S49 Lymphoma Cells
K. H. Jakobs, U. Gehring, B. Gaugler, T. Pfeuffer, and G. Schultz 605–611

Indexed in Current Contents